

A

PATENT

Docket No. 1948-4541

Express Mail Label No. TB608952916US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

UTILITY APPLICATION AND APPLICATION FEE TRANSMITTAL (1.53(b))

ASSISTANT COMMISSIONER FOR PATENTS
Box Patent Application
Washington, D.C. 20231

Sir:

Transmitted herewith for filing is the patent application of

Named Inventor(s) and
Address(es):

Jean GAUTIER, 6 Chemin des Rangeardieres, 49124 Saint Barthelemy d'Anjou, France

A SUPPORT PLINTH FOR A POWER DIODE IN A MOTOR VEHICLE
ALTERNATOR

Enclosed are:

☒ 7 page(s) of specification, 1 page(s) of Abstract, 2 page(s) of claims

☐ 1 sheets of drawing ☒ formal ☐ informal

☐ 6 page(s) of Declaration and Power of Attorney

☒ Unsigned

☐ Newly Executed

☐ Copy from prior application

☐ Deletion of inventors including Signed Statement under 37 C.F.R. § 1.63(d)(2)

☐ Incorporation by Reference: The entire disclosure of the prior application, from which a copy of the combined declaration and power of attorney is supplied herein, is considered as being part of the disclosure of the accompanying application and is incorporated herein by reference.

☐ Microfiche Computer Program (Appendix)

☐ _____ page(s) of Sequence Listing

☐ computer readable disk containing Sequence Listing

☐ Statement under 37 C.F.R. § 1.821(f) that computer and paper copies of the Sequence Listing are the same

jc542 U.S. PTO
09/149424
09/08/98

- ☒ Claim for Priority
- ☒ Certified copy of Priority Document(s)
 - ☐ English translation documents
- ☒ Information Disclosure Statement
 - ☒ Copy of 7 cited references
 - ☐ Copy of PTO-1449 filed in parent application serial No. _____
- ☐ Preliminary Amendment
- ☒ Return receipt postcard (MPEP 503)
- ☐ Assignment Papers (assignment cover sheet and assignment documents)
 - ☐ A check in the amount of \$40.00 for recording the Assignment.
 - ☐ Assignment papers filed in parent application Serial No. _____
 - ☐ Certification of chain of title pursuant to 37 C.F.R. § 3.73(b).
- ☐ This is a ☐ continuation ☐ divisional ☐ continuation-in-part (C-I-P) of prior application serial no. _____
- ☐ Cancel in this application original claims _____ of the parent application before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)
- ☐ A preliminary Amendment is enclosed. (Claims added by this Amendment have been properly numbered consecutively beginning with the number following the highest numbered original claim in the prior application.
- ☐ The status of the parent application is as follows:
 - ☐ A Petition For Extension of Time and a Fee therefor has been or is being filed in the parent application to extend the term for action in the parent application until _____
 - ☐ A copy of the Petition for Extension of Time in the co-pending parent application is attached.
 - ☐ No Petition For Extension of Time and Fee therefor are necessary in the co-pending parent application.
- ☐ Please abandon the parent application at a time while the parent application is pending or at a time when the petition for extension of time in that application is granted and while this application is pending has been granted a filing date, so as to make this application co-pending.
 - ☐ Transfer the drawing(s) from the patent application to this application.
- ☐ Amend the specification by inserting before the first line the sentence:
This is a ☐ continuation ☐ divisional ☐ continuation-in-part of co-pending application Serial No. _____ filed _____

I. CALCULATION OF APPLICATION FEE (For Other Than A Small Entity)

	Number Filed		Number Extra	Rate	Basic Fee
Total Claims	10	-20=	0	x\$22.00	\$ 0
Independent Claims	1	- 3=	0	x82.00	\$ 0
Multiple Dependent Claims	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no				Additional Fee = \$270.00 Add'l Fee = NONE
					\$ 0

Total: \$ 790.00

- ☐ A statement claiming small entity status is attached or has been filed in the above-identified parent application and its benefit under 37 C.F.R. § 1.28(a) is hereby claimed. Reduced fees under 37 C.F.R. § 1.9(F) (50% of total) paid herewith \$ _____.
- ☒ A check in the amount of \$ \$790.00 in payment of the application filing fees is attached.
- ☐ Charge Fee(s) to Deposit Account No. 13-4500. Order No. _____. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.
- ☒ The Assistant Commissioner is hereby authorized to charge any additional fees which may be required for filing this application, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1948-4541 _____. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Respectfully submitted,

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Dated: September 8, 1998

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 Rev. 5/21/98

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Application Information

Title Line One :: A SUPPORT PLINTH FOR A POWER DIODE IN A
Title Line Two :: MOTOR VEHICLE ALTERNATOR
Total Drawing Sheets :: 1
Formal Drawings :: Y
Application Type :: Utility
Docket Number :: 1948-4541

Representative Information

Registration Number One :: 28,287

Prior Foreign Applications

Foreign Application One :: 97 11133
Filing Date :: 08 September 1997
Country :: France
Priority Claimed :: Y

PATENT

Docket No. 1948-4541

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES PATENT APPLICATION

For: A SUPPORT PLINTH FOR A POWER DIODE IN A MOTOR
VEHICLE ALTERNATOR

Inventors: Jean GAUTIER
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49124 Saint Barthelemy d'Anjou
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A SUPPORT PLINTH FOR A POWER DIODE IN A MOTOR VEHICLE ALTERNATOR

FIELD OF THE INVENTION

This invention relates to plinths for supporting
5 mounting diodes, in particular power diodes
constituting a rectifier bridge, in a machine such as
an alternator, especially for motor vehicles.

BACKGROUND OF THE INVENTION

It is known from French patent specification No. FR 2
10 737 618A to mount a diode on a support plinth or base
which is generally in the form of a thick disc. One
end of the diode is welded (or soldered) to one face of
the plinth. The plinth is then force-fitted into a
hole in a heat sink, or dissipator, of an alternator,
15 from one side of the heat sink that faces towards the
stator of the alternator, with the diode being finally
disposed on a side of the dissipator which is opposite
to the stator. This arrangement of diode and plinth
has the advantage that it is thus possible to fix
20 diodes at will to the same heat sink, whether they are
adapted for either direct force-fitting, or for welding
(soldering), the diodes having in the latter case been
previously secured to a support plinth or base. With a
view to precise axial positioning of each diode in the
25 corresponding hole, the diode has to be introduced from
a side of the heat sink which is directed towards the
stator. However, this handling operation is in general
a very delicate one to carry out, because of the
configuration of the alternator on the same side of the
30 heat sink as the stator.

DISCUSSION OF THE INVENTION

One object of the invention is to make it easier to fit the diode in place, while retaining the advantage described above.

- 5 According to the invention, a support plinth for a diode adapted to be soldered or welded in place, the plinth being adapted to receive a diode housing welded to it, the plinth comprising a plug portion adapted to be force-fitted into a hole in a support along an axis
10 of the plinth, is characterised in that the plinth includes an abutment portion projecting from the plug portion in a direction radial to the axis.

- Thus, the abutment portion is adapted to come into engagement against the support during fitting of the diode. In this way, precise axial positioning of the
15 diode with respect to the support is obtained. In an alternator, this plinth makes it possible to fit the diode from the opposite side of the support from the stator. Fitting of the diode is thereby made easier.
- 20 In addition the plinth enables the diode to be fitted in a hole which is blind towards the stator. Moreover, there is no danger of the diode being altered while being fitted.

- The abutment portion preferably has an upper engagement
25 face which is oriented away from the abutment portion of the plinth and which defines a flat upper abutment zone perpendicular to the axis. In this way the plinth is well adapted for engagement by a force-fitting tool.

- Preferably, the plinth has a cavity which is adapted to
30 receive the diode, with the upper engagement face

projecting from the cavity in the axial direction. The assembly consisting of the diode and the plinth is therefore very small in the axial direction.

5 The abutment portion preferably has a lower abutment face which is oriented towards the abutment portion and which defines a flat lower abutment zone at right angles to the axis.

10 The invention also provides an assembly consisting of a diode and a support plinth, with the diode comprising a housing fixed to the plinth, the latter being a plinth according to the invention. The abutment portion is then preferably interposed in the axial direction between the diode and the plug portion of the plinth. This configuration is particularly well suited to an
15 assembly operation carried out from the opposite side of the support from the stator. The abutment portion preferably projects from the diode in the direction radial to the axis.

20 In addition, according to a further aspect of the invention, an alternator, especially for a motor vehicle, comprises a support and an assembly consisting of a diode and a plinth, the plinth being fixed to the diode and force-fitted in a hole in the support, the assembly being in accordance with the invention as
25 defined above. The abutment portion preferably extends on one side of the support, opposite to a stator of the alternator. The plug portion is preferably force-fitted in a blind hole in the support.

30 Further features and advantages of the invention will appear more clearly on a reading of the following detailed description of a preferred embodiment of the

invention, which is given by way of non-limiting example only and with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

- 5 Figure 1 is a view in elevation, in partial axial cross section, of an assembly according to the invention comprising a support plinth and a diode.

Figure 2 is a view in cross section of the assembly shown in Figure 1, mounted in a support which consists
10 of a bearing of an alternator, this view also showing the assembly tool.

DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION

With reference to Figure 1, the assembly 2 in this embodiment of the invention comprises a diode 4 and a
15 support base or plinth 6. The diode 4 is a conventional power diode adapted to be welded (or soldered) in place. It comprises a metallic housing 8 which encloses a semiconductor component. The housing 8 defines a form of revolution about an axis of
20 symmetry, and has a flat circular face 10, which in this example is its lower face and which constitutes a connecting terminal for the diode. The diode has another connecting terminal 12, which is elongate in form and coaxial with the housing 8, the terminal 12
25 being opposed to the face 10 in the axial direction.

The plinth 6 is symmetrical as a body of revolution about an axis 14. It comprises an abutment portion 16 and a plug portion 18, each of which is in the form of

a thick disc. The plinth is made of an electrically conductive metal, and consists of a single piece.

The abutment portion 16 has a cylindrical side face 20, an annular, flat upper face 22, and an annular, flat lower face 24, both of which are contiguous to the side face 20. In the centre of the upper face 22, the abutment portion 16 has a cavity with a flat base 26 which lies at right angles to the axis 14. Thus the upper face 22 projects from the base 26 of the cavity in the direction of the axis 14.

The plug portion 18 of the plinth has a cylindrical side face 26 which is formed with ridges or knurls parallel to the axis 14. The plug portion 18 has a radius smaller than that of the side face 20 of the abutment portion 16, so that as a result the abutment portion projects from the plug portion in the direction which is radial to the axis 14. The diode 4 lies in the cavity, and the lower face 10 of the housing 8 is welded to the base 26 of the cavity, the diode 4 and the plinth 6 being coaxial with each other. The radius of the abutment portion 16 is greater than the largest radius of the diode 4, so that the abutment portion projects from the diode in the direction radial to the axis 14.

Referring now to Figure 2, the diode 4 and the plinth 6 are designed to form part of a motor vehicle alternator. The alternator has a rear bearing 30, at the opposite end of the machine from the alternator pulley. The rear bearing lies in a general plane which is at right angles to the axis 32 of the alternator, the direction of which is indicated in Figure 2.

The alternator includes a series of power diodes 4 which constitute a rectifier bridge. The diode 4 described above forms part of this bridge. Each diode is associated with a plinth 6. The assemblies
 5 consisting of a plinth 6 and diode 4 are fixed to the rear bearing 30 (which in the present case also serves as a dissipator of heat), and for that purpose the bearing 30 has circular holes 34 with an axis parallel to the axis 32. The holes 34 are for example blind
 10 holes, being obturated on one side 36 of the bearing, this being the side which is oriented towards the stator of the alternator. The bearing can thus constitute a sealed partition.

In order to secure the diode 4 to the bearing 30, the
 15 diode 4 is welded or soldered to the plinth 6. The assembly is then placed on a force-fitting tool 38. One end of the tool comes into abutment against the side face 20 and the upper face 22 of the abutment portion 16 of the plinth. The diode and the plinth are
 20 presented from one side 39 of the bearing opposite to the stator, the base 6 and the hole 34 being coaxial. By means of the tool 38, the plug portion 16 is force-fitted into the hole 34 until the lower face 24 of the abutment portion 16 comes into engagement against the
 25 side 39 of the bearing. The tool is then withdrawn. The diode is now in position, on the side 39 of the bearing opposite to the stator.

Once the alternator has been assembled, the diode 4 lies facing an outer cap 40 of the alternator. This
 30 cap is shown in phantom lines in Figure 2.

Numerous modifications can of course be made to the invention without departing from the scope of the

invention. The hole 34 in the bearing may be a through hole. The support for the plinth may be in the form of a dissipator of heat separate from the rear bearing.

The abutment portion of the plinth can be made in a
5 non-circular form, and it also may not even be
symmetrical with respect to the axis of the plinth.

WHAT IS CLAIMED IS:

1. A plinth for supporting a diode having a casing and being further adapted for the diode casing to be welded on the plinth, the plinth including a plug portion
5 adapted to be force-fitted into an aperture and defining an axis of the plinth, wherein the plinth further includes an abutment portion projecting with respect to the plug portion in a direction radial to the said axis.
- 10 2. A plinth according to Claim 1, wherein the abutment portion has an upper engagement face oriented away from the plug portion and defining a flat upper engagement zone at right angles to the said axis.
3. A plinth according to Claim 2, defining a cavity
15 for receiving a said diode, with the upper engagement face projecting from the said cavity in the axial direction.
4. A plinth according to Claim 1, wherein the abutment portion has a lower engagement face oriented towards
20 the plug portion and defining a flat lower engagement zone at right angles to the said axis.
5. An assembly comprising a diode having a casing and a plinth according to Claim 1, the said casing being fixed to the plinth.
- 25 6. An assembly according to Claim 5, wherein the abutment portion of the plinth is interposed between the diode and the plug portion in the axial direction.

7. An assembly according to Claim 5, wherein the abutment portion of the plinth projects from the diode in a direction radial to the axis.

8. An alternator including a support having a hole,
5 and an assembly according to Claim 5 with the plug portion of the plinth force-fitted into the said hole in the support.

9. An alternator according to Claim 8 having a stator
10 disposed to one side of the said support, the abutment portion of the plinth being on the other side of the support.

10. An alternator according to Claim 8, wherein the said hole is a blind hole.

A SUPPORT PLINTH FOR A POWER DIODE IN A MOTOR VEHICLE ALTERNATOR

ABSTRACT OF THE DISCLOSURE

A motor vehicle alternator includes a support having a
5 hole which receives a plug portion of a support plinth
on which a power diode is welded or soldered, the
plinth having an axis along which it is force-fitted in
the hole. The plinth also has an abutment portion
projecting radially from the plug portion with respect
10 to the axis.

FIG. 1

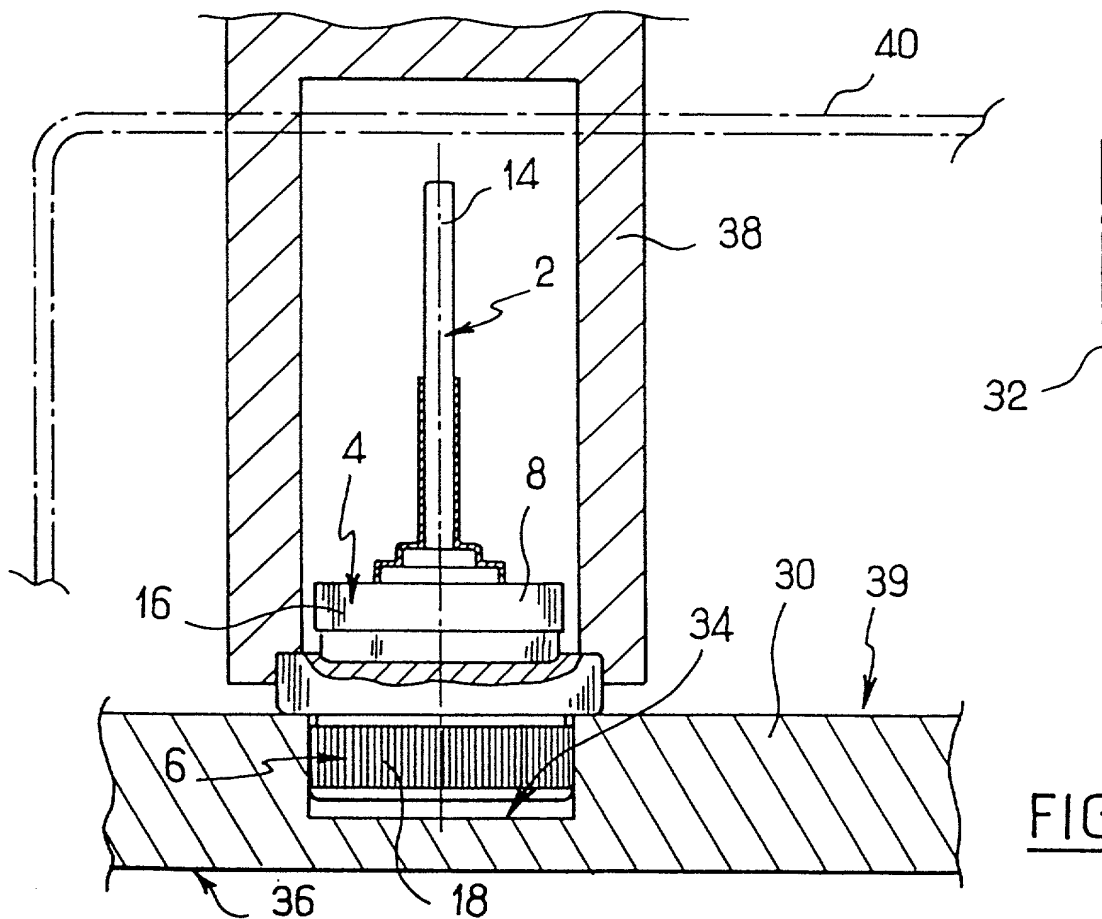
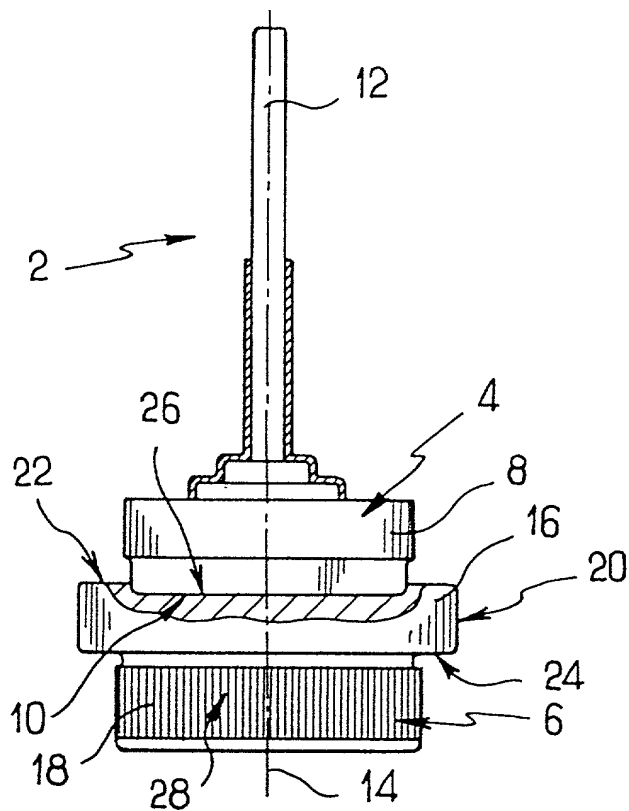


FIG. 2

COMBINED DECLARATION AND POWER OF ATTORNEY FOR
ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL
DIVISIONAL, CONTINUATION OR CONTINUATION-IN-PART APPLICATION

As a below name inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

A SUPPORT PLINTH FOR A POWER DIODE IN A MOTOR VEHICLE ALTERNATOR
the specification of which

a. ☒ is attached hereto

b. ☐ was filed on _____ as application Serial No. _____ and was amended on _____ (if applicable).

PCT FILED APPLICATION ENTERING NATIONAL STATE

c. ☐ was described and claimed in International Application No. _____ filed on _____ and as amended on _____ (if any).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

I hereby specify the following as the correspondence address to which all communications about this application are to be directed:

SEND CORRESPONDENCE TO: MORGAN & FINNEGAN, L.L.P.
345 Park Avenue
New York, N.Y. 10154

DIRECT TELEPHONE CALLS TO: Joseph A. Calvaruso
(212) 758-4800

☐ I hereby claim foreign priority benefits under Title 35, United States Code § 119(a)-(d) or under § 365(b) of any foreign application(s) for patent or inventor's certificate or under § 365(a) of any PCT international application(s) designating at least one country other than the U.S. listed below and also have identified below such foreign application(s) for patent or inventor's certificate or such PCT international application(s) filed by me on the same subject matter having a filing date within twelve (12) months before that of the application on which priority is claimed:

☒ The attached 35 U.S.C. § 119 claim for priority for the application(s) listed below forms a part of this declaration.

<u>Country/PCT</u>	<u>Application Number</u>	<u>Date of filing (day, month, yr)</u>	<u>Date of Issue (day, month, yr)</u>	<u>Priority Claimed</u>
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France	97 11133	08.09.97		[x] YES [] NO
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[] YES [] NO

[] YES [] NO

[] I hereby claim the benefit under 35 U.S.C. § 119(e) of any U.S. provisional application(s) listed below.

Provisional Application No.

Date of Filing (day, month, yr)

**ADDITIONAL STATEMENTS FOR DIVISIONAL, CONTINUATION OR CONTINUATION-IN-PART
OR PCT INTERNATIONAL APPLICATION(S) (DESIGNATING THE U.S.)**

I hereby claim the benefit under Title 35, United States Code § 120 of any United States application(s) or under § 365(c) of any PCT international application(s) designating the U.S. listed below.

<u>US/PCT Application Serial No.</u>	<u>Filing Date</u>	<u>Status (patented, pending, abandoned)/ U.S. application no. assigned (For PCT)</u>
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<u>US/PCT Application Serial No.</u>	<u>Filing Date</u>	<u>Status (patented, pending, abandoned)/ U.S. application no. assigned (For PCT)</u>
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[] In this continuation-in-part application, insofar as the subject matter of any of the claims of this application is not disclosed in the above listed prior United States or PCT international application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or Imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following attorneys and/or agents with full power of substitution and revocation, to prosecute this application, to receive the patent, and to transact all business in the Patent and Trademark Office connected therewith: John A. Diaz (Reg. No. 19,550), John C. Vassil (Reg. No. 19,098), Alfred P. Ewert (Reg. No. 19,887), David H. Pfeffer, P.C. (Reg. No. 19,825), Harry C. Marcus (Reg. No. 22,390), Robert E. Paulson (Reg. No. 21,046), Stephen R. Smith (Reg. No. 22,615), Kurt E. Richter (Reg. No. 24,052), J. Robert Dailey (Reg. No. 27,434), Eugene Moroz (Reg. No. 25,237), John F. Sweeney (Reg. No. 27,471), Arnold I. Rady (Reg. No. 26,601), Christopher A.

Hughes (Reg. No. 26,914), William S. Feiler (Reg. No. 26,728), Joseph A. Calvaruso (Reg. No. 28,287), James W. Gould (Reg. No. 28,859), Richard C. Komson (Reg. No. 27,913), Israel Blum (Reg. No. 26,710), Bartholomew Verdirame (Reg. No. 28,483), Maria C.H. Lin (reg. No. 29,323), Joseph A. DeGirolamo (Reg. No. 28,595), Michael A. Nicodema (Reg. No. 33,199), Michael P. Dougherty (Reg. No. 32,730), Seth J. Atlas (Reg. No. 32,454), Andrew M. Riddles (Reg. No. 31,657), Bruce D. DeRenzi (Reg. No. 33,676), Michael M. Murray (Reg. No. 32,537) and Mark J. Abate (Reg. No. 32,527) of Morgan & Finnegan, L.L.P. whose address is: 345 Park Avenue, New York, New York, 10154; and Edward A. Pennington (Reg. No. 32,588) of Morgan & Finnegan, L.L.P., whose address is 1775 Eye Street, Suite 400, Washington, D.C. 20006.

[] I hereby authorize the U.S. attorneys and/or agents named hereinabove to accept and follow instructions from _____ as to any action to be taken in the U.S. Patent and Trademark Office regarding this application without direct communication between the U.S. attorneys and/or agents and me. In the event of a change in the person(s) from whom instructions may be taken I will so notify the U.S. attorneys and/or agents hereinabove.

Full name of sole or first inventor Jean Gautier

Inventor's signature* _____

_____ date

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Full name of second joint inventor, if any _____

Inventor's signature* _____

_____ date

Residence _____

Citizenship _____

Post Office Address _____

[] ATTACHED IS ADDED PAGE TO COMBINED DECLARATION AND POWER OF ATTORNEY FOR SIGNATURE BY THIRD AND SUBSEQUENT INVENTORS FORM.

* Before signing this declaration, each person signing must:

1. Review the declaration and verify the correctness of all information therein; and
2. Review the specification and the claims, including any amendments made to the claims.

After the declaration is signed, the specification and claims are not to be altered.

To the inventor(s):

The following are cited in or pertinent to the declaration attached to the accompanying application:

Title 37, Code of Federal Regulation, § 1.56

Duty to disclose information material to patentability.

(a) A patent by its very nature is affect with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in patent was cited by the Office or submitted to the Office in the manner prescribed by §§1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

Title 35, U.S. Code § 101

Inventions patentable

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Title 35 U.S. Code § 102

Conditions for patentability; novelty and loss of right to patent

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent,

(b) the invention was patented or described in a printed publication in this or foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States, or

- (c) he has abandoned the invention, or
- (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or
- (f) he did not himself invent the subject matter sought to be patented, or
- (g) before the applicant's invention thereof the invention was made in this country by another had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other ...

Title 35, U.S. Code § 103

Conditions for patentability; non-obvious subject matter

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Title 35, U.S. Code § 112 (in part)

Specification

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise and exact terms also enable any person skilled in the art to which it pertains, or with which it is mostly nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Title 35, U.S. Code § 119

Benefit of earlier filing date in foreign country; right of priority

An application for patent for an invention filed in this country by any person who has, or whose legal representatives or assigns have, previously regularly filed an application for a patent for the same invention in a foreign country which affords similar privileges in the case of applications filed in the United States or to citizens of the United States, shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country, if the application in

this country is filed within twelve months from the earliest date on which such foreign application was filed; but no patent shall be granted on any application for patent for an invention which had been patented or described in a printed publication in any country more than one year before the date of the actual filing of the application in this country, or which had been in public use or on sale in this country more than one year prior to such filing.

Title 35, U.S. Code § 120

Benefit or earlier filing date in the United States

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States, or as provided by section 363 of this title, which is filed by an inventor or inventors named in the previously filed application shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application.

Please read carefully before signing the Declaration attached to the accompanying Application.

If you have any questions, please contact Morgan & Finnegan, L.L.P.

FORM:COMB-DEC.NY
Rev. 5/21/98